

## Author Index

- Arora, V.K., *see* Gajri, P.R. et al.  
 Arshad, M.A., *see* Gill, K.S. et al.  
 Arts, W.B.M., *see* Koolen, A.J. et al.  
 Barber, S.A., *see* Kovar, J.L. et al.  
 Bouma, J., *see* Wopereis, M.C.S. et al.  
 Brandt, S.A., *see* Zentner, R.P. et al.  
 Campbell, C.A., *see* Zentner, R.P. et al.  
 Campbell, D.J., *see* Chamen, W.C.T. et al.  
     *see* Dickson, J.W. et al.  
     *see* Douglas, J.T. et al.  
 Chamen, W.C.T. (Silsoe, UK), Vermeulen, G.D. (Wageningen, Netherlands), Campbell, D.J. (Penicuik, UK) and Sommer, C. (Braunschweig, Germany)  
     Reduction of traffic-induced soil compaction: a synthesis ..... 303  
 Chamen, W.C.T., Watts, C.W., Leede, P.R. and Longstaff, D.J. (Silsoe, UK)  
     Assessment of a wide span vehicle (gantry) and soil and cereal crop responses to its use in a zero traffic regime ..... 359  
 Chivunda, B.K., *see* Gill, K.S. et al.  
 Cook, G.D., So, H.B. (St. Lucia, Qld., Australia) and Dalal, R.C. (Toowoomba, Qld., Australia)  
     Structural degradation of two Vertisols under continuous cultivation ..... 47  
 Crawford, C.E., *see* Douglas, J.T. et al.  
 Dalal, R.C., *see* Cook, G.D. et al.  
 Davis, G.W. (Rondebosch, South Africa)  
     Effects of tillage on heathland soil: disturbance of a natural mountain fynbos system in the southwestern Cape, South Africa ..... 29  
 Dexter, A.R. (Bedford, UK) and Young, I.M. (Dundee, UK)  
     Soil physics towards 2000 ..... 101  
 Dick, W.A., Stehouwer, R.C. (Wooster, OH, USA), Edwards, W.M. (Coshocton, OH, USA) and Eckert, D.J. (Columbus, OH, USA)  
     Maize yield and nitrogen uptake after established no-tillage fields are plowed ..... 1  
 Dickson, J.W., Campbell, D.J. and Ritchie, R.M. (Penicuik, UK)  
     Zero and conventional traffic systems for potatoes in Scotland, 1987–1989 ..... 397  
 Douglas, J.T., Campbell, D.J. and Crawford, C.E. (Penicuik, UK)  
     Soil and crop responses to conventional, reduced ground pressure and zero traffic systems for grass silage production ..... 421  
 Eckert, D.J., *see* Dick, W.A. et al.  
 Edwards, W.M., *see* Dick, W.A. et al.  
 Fortin, M.C., *see* Pierce, F.J. et al.  
 Gajri, P.R., Arora, V.K. and Prihar, S.S. (Ludhiana, India)  
     Tillage management for efficient water and nitrogen use in wheat following rice ..... 167  
 Gee-Clough, D., *see* Salokhe, V.M. et al.  
 Gill, K.S., Arshad, M.A. (Beaverlodge, Alta, Canada), Chivunda, B.K., Phiri, B. and Gumbo, M. (Chilanga, Zambia)  
     Influence of residue mulch, tillage and cultural practices on weed mass and corn yield from three field experiments ..... 211

- Griffith, D.R., *see* Kovar, J.L. et al.
- Gumbo, M., *see* Gill, K.S. et al.
- Kettles, H.K., *see* Sparling, G.P. et al.
- Kirkegaard, J.A., So, H.B., Troedson, R.J. and Wallis, E.S. (St. Lucia, Qld., Australia)  
The effect of compaction on the growth of pigeonpea on clay soils. I. Mechanisms of crop response and seasonal effects on a vertisol in a sub-humid environment ..... 107
- Kirkegaard, J.A., Troedson, R.J., So, H.B. and Kushwaha, B.L. (St. Lucia, Qld., Australia)  
The effect of compaction on the growth of pigeonpea on clay soils. II. Mechanisms of crop response and seasonal effects on an oxisol in a humid coastal environment ..... 129
- Kirkland, K.J., *see* Zentner, R.P. et al.
- Kladivko, E.J., *see* Kovar, J.L. et al.
- Klooster, J.J., *see* Vermeulen, G.D. and Klooster, J.J.
- Koolen, A.J., Kurstjens, D.A.G., van den Akker, J.J.H., Arts, W.B.M. (Wageningen, Netherlands) and Lerink, P. (Haringvliet, Netherlands)  
Prediction of aspects of soil-wheat systems ..... 381
- Kovar, J.L., Barber, S.A., Kladivko, E.J. and Griffith, D.R. (West Lafayette, IN, USA)  
Characterization of soil temperature, water content, and maize root distribution in two tillage systems ..... 11
- Kurstjens, D.A.G., *see* Koolen, A.J. et al.
- Kushwaha, B.L., *see* Kirkegaard, J.A., et al.
- Lal, R. and Tanaka, H. (Columbus, OH, USA)  
Simulated harvest-traffic effects on corn, oats and soybean yields in western Ohio ..... 65
- Leede, P.R., *see* Chamen, W.C.T. et al.
- Lerink, P., *see* Koolen, A.J. et al.
- Lindstrom, M.J. (Morris, MN, USA), Nelson, W.W. (Lamberton, MN, USA) and Schumacher, T.E. (Brookings, SD, USA)  
Quantifying tillage erosion rates due to moldboard plowing ..... 243
- Longstaff, D.J., *see* Chamen, W.C.T. et al.
- Nelson, W.W., *see* Lindstrom, M.J. et al.
- Olsen, H.J. (Uppsala, Sweden)  
Sensing of aggregate size by means of a horizontal mini-penetrometer ..... 79
- O'Sullivan, M.F. (Penicuik, UK)  
Uniaxial compaction effects on soil physical properties in relation to soil type and cultivation ..... 257
- Phiri, B., *see* Gill, K.S. et al.
- Pierce, F.J., Stanton, M.J. (East Lansing, MI, USA) and Fortin, M.C. (Ottawa, Ont., Canada)  
Immediate and residual effects of zone-tillage in rotation with no-tillage on soil physical properties and corn performance ..... 149
- Prihar, S.S., *see* Gajri, P.R. et al.
- Ritchie, R.M., *see* Dickson, J.W. et al.
- Salokhe, V.M., Suharno and Gee-Clough, D. (Bangkok, Thailand)  
Effect of enamel coating on the field performance of a mouldboard plough ..... 285
- Schumacher, T.E., *see* Lindstrom, M.J. et al.
- Shepherd, T.G., *see* Sparling, G.P. et al.
- So, H.B., *see* Kirkegaard, J.A. et al.  
*see* Cook, G.D. et al.
- Sommer, C., *see* Chamen, W.C.T. et al.
- Sommer, C. and Zach, M. (Braunschweig, Germany)  
Managing traffic-induced soil compaction by using conservation tillage ..... 319

- Sonntag, G.J., *see* Zentner, R.P. et al.
- Sparling, G.P., Kettles, H.K. (Lower Hutt, New Zealand) and Shepherd, T.G. (Palmerston North, New Zealand)  
 Changes in soil organic C, microbial C and aggregate stability under continuous maize and cereal cropping, and after restoration to pasture in soils from the Manawatu region, New Zealand ..... 225
- Stanton, M.J., *see* Pierce, F.J. et al.
- Stehouwer, R.C., *see* Dick, W.A. et al.
- Suharno, *see* Salokhe, V.M. et al.
- Tanaka, H., *see* Lal, R. and Tanaka, H.
- Taylor, J.H. (Auburn, AL, USA)  
 Reduction of traffic-induced soil compaction ..... 301
- Troedson, R.J., *see* Kirkegaard, J.A. et al.
- Twomlow, S.J., *see* Willcocks, T.J. and Twomlow, S.J.
- Van den Akker, J.J.H., *see* Koolen, A.J. et al.
- Vermeulen, G.D., *see* Chamen, W.C.T. et al.
- Vermeulen, G.D. and Klooster, J.J. (Wageningen, Netherlands)  
 The potential of a low ground pressure traffic system to reduce soil compaction on a clayey loam soil ..... 337
- Wallis, E.S., *see* Kirkegaard, J.A. et al.
- Watts, C.W., *see* Chamen, W.C.T. et al.
- Willcocks, T.J. and Twomlow, S.J. (Bedford, UK)  
 An evaluation of sustainable cultural practices for rainfed sorghum production on Vertisols in east Sudan ..... 183
- Woodhead, T., *see* Wopereis, M.C.S. et al.
- Wopereis, M.C.S., Wosten, J.H.M. and Bouma, J. (Wageningen, Netherlands) Woodhead, T. (Manila, Philippines)  
 Hydraulic resistance in puddled rice soils: measurement and effects on water movement ..... 199
- Wosten, J.H.M., *see* Wopereis, M.C.S. et al.
- Young, I.M., *see* Dexter, A.R. and Young, I.M.
- Zach, M., *see* Sommer, C. and Zach, M.
- Zentner, R.P., Campbell, C.A., Sonntag, G.J. (Swift Current, Sask, Canada) Brandt, S.A. and Kirland, K.J. (Scott, Sask, Canada)  
 Economics of rotation and tillage systems for the dark brown soil zone of the Canadian prairies ..... 271

